

American Institute of Aeronautics and Astronautics

TELEMETRY

The Newsletter of the AIAA Alabama-Mississippi Section – March 2004





From the Chairman...

AIAA Web Advisory Team

AIAA has formed a Web Advisory Team that is chartered to develop and recommend ideas and procedures to enhance the overall value of the Web site to members, as well as attracting prospective members. I have been appointed to the team and will be focusing on web site functions associated with the various Sections and Regions. I am soliciting inputs on issues and suggestions for how to make the AIAA web site better. If you have any AIAA website comments, gripes, or suggestions for improvement, please email them to me at steven.r.noneman@nasa.gov or call me at 544-2048. Thank you for your participation!

-- Steve Noneman

Section Seeking Nominations for Officers and Directors

The Section Nominating Committee has begun its work toward obtaining candidates for officer positions (Chairman, Vice-Chairman, Secretary, Treasure) and three open director positions for our annual election. Officers serve one-year terms. Director positions are two-year terms. Mr. Bob Noblitt (256-461-1993 or email at bobnoblitt@msn.com) is the chairman of the committee, and would welcome any inputs you might have about possible candidates for the 2004-05 Section year. Other committee members are:

Dr. Ann Whitaker, 256-544-2481, ann.whitaker@nasa.gov Mr. Ed Pruett, 256-830-9200, edwin.pruett@lmco.com Mr. Todd Honeycutt, 256-430-0753, thoneycutt@stsllc.com If you have questions, contact any committee member. Note that an initial list of candidates will be provided to the Secretary by March 15. Members can also declare themselves as candidates, but must do so in writing. Declarations must be received by April 1, and can be emailed to any committee member or mailed to: AIAA AL-

MS Section, P.O. Box 7280, Huntsville, AL 35807.

2nd Annual Symposium with UAH a SUCCESS!

The AIAA Alabama-Mississippi Section and the UAH Foundation cosponsored a Tactical Interceptor Design Symposium that was held on 16 January at the UAH Bevill Center. This was a very successful event, with approximately 87 persons participating, including 32 professional attendees, 31 students, 15 speakers, and 9 staff.

The Technical Co-Chairs of the Symposium were Mr. Roswell Nourse of AMCOM, and Dr. Robert Frederick of UAH. Registration and other duties were handled by the AIAA members shown in the photo. Left-to-right in the picture are Dr. Arloe Mayne and Mr. Earl Pearce, seated; and Mr. Steve Noneman, Mr. Kevin Connell, Mr. Alan Lowrey, and Mr. Tom Dollman, standing. Section Treasurer Mr. Kevin Higdon received advance registrations for the professional attendees, and managed the event finances. An AIAA display and membership applications were provided at the Symposium, and approximately 20 professional attendees and 2 students membership. applied for AIAA financially important event for the Section, this year's proceeds will pay almost all of the Section's anticipated scholarship awards this year. This is the second year that the Section has co-sponsored such symposium with UAH. Last year's topic was Tactical Missile Design.



At Our Recent Dinner Meetings ...





Dr. Mark Adler of NASA/JPL (top photo, on the left) gets a handshake from Vice-Chairman Joe Sims at the November 3rd dinner meeting. Dr. Adler is the Mission Manager for the Mars Exploration Rover "Spirit", and managed rover descent, entry and landing. He gave a fascinating description of the rovers' functions and mission goals, and included a video depicting the overall mission operation, from launch to surface deployment, and illustrating the rovers at work.

Dr. L. Scott Miller (on left in photo), Professor of Aerospace Engineering and a National Institute for Aviation Research Fellow at Wichita State University (WSU), receives a thank you from Chairman Steve Noneman for his presentation. Dr. Miller is an AIAA Distinguished Lecturer, and presented "The World of Secret Flight" to the Section on February 19. Dr. Miller discussed the development of secret US aircraft, like the U-2 and the SR-71, and the infrastructure around them. He also gave conjecture on rumored aircraft, such as on the Aurora and on some high-performance UAVs. And he presented entertaining video debunking some noted UFO "sightings".



And Presenting on April 15 Mr. Bruno L. Cavallo, AIAA Distinguished Lecturer *Topic*: German Helicopter Development, 1936-1945

Cost: \$20

6:00pm social and 7:00pm dinner - Holiday Inn-Research Park, Huntsville, AL More information coming...Contact Joe Sims for reservations.

Joseph.D.Sims@nasa.gov 256-544-4650

Solar Sail Technology

An AIAA Lunch-&-Learn Presentation by:

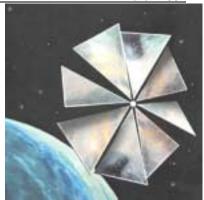
Mr. Greg Garbe, MSFC Space Transportation Directorate The event is FREE. No reservations are required.

Friday, March 19, 11am-12noon

NASA/MSFC, Building 4203, Room 4002

Questions? Contact: Mr. Joe Sims

email: Joseph.D.Sims@nasa.gov or phone: 256-544-4650



The Great Moonbuggy Race is Fast Approaching!!

The 11th annual Great Moonbuggy Race is just around the corner. The race features high school and college teams from across the nation that have designed and built their own moonbuggies. The teams will then race their creations against the clock to produce the fastest time. Each year AIAA sponsors a design competition that compliments the race. This competition calls for the teams to submit portfolios that document the development of their moonbuggy. The AL-MS section then judges the teams' portfolios and oral presentations to determine the design competition winner. This is where we can use your help. Several volunteers from the section are needed to help judge the design competition on the days of the races. High School competitions will take place on Friday, April 2, 2004; college competitions will take place on Saturday, April 3, 2004. If you are interested in serving on one or both days please contact:

Mr. Kevin Connell email: kconnell@aerospace.state.al.us or phone: 256-782-5972

Oberth Award Busts Cast at UAB

The Section sincerely thanks the Material Sciences and Engineering (MSE) Department at the University of Alabama in Birmingham for casting busts for use in the Section's Hermann Oberth Award. The Oberth Award, first given in 1959, is the most prestigious award presented at the Section's Annual Awards and Installation Banquet. This Award is presented to a Section member in recognition of outstanding individual scientific achievement in the field of astronautics or for the promotion and advancement of the aeronautical sciences. Award recipients include Dr. Wernher Von Braun, Skylab astronaut Dr. Owen Garriott, and many other distinguished engineers and scientists. The Award consists of a bust of Professor Hermann Oberth and a framed certificate. Professor Oberth is considered to be the "Father of Space Travel" because of his pioneering work in that area. On a lighter note, because it is cast in solid bronze, recipients of this award are cautioned to be prepared for its approximately 25 pound weight when they are given the bust. This past May the Section presented the last bust of a group cast about 5 years ago, and it became time to seek a source of busts for subsequent Awards. Section Vice-Chairman Joe Sims spoke with Dr. Charles Bates, a Research Professor in UAB's MSE Department, who generously agreed to cast a set of busts for the Section, and we now have 4 busts for upcoming Oberth Awards. The busts are individually made using the lost-wax casting technique, and Southern Tool of Anniston used the rubber mold which the Section has to prepare the ceramic shells in

In conjunction with making the castings, MSE personnel investigated various aspects of the process, including the mold temperature and methods of feeding the molten bronze into the mold. The photo, taken by Section Supernumerary Earl Pearce, shows a casting made on 21 January in the UAB foundry. Pictured, from left to right, are Mr. John Griffin, a MSE Research Engineer, Mr. John Wilson, a MSE student, Dr. Arloe Mayne, past Section Chairman, and Mr. Preston Scarber, the MSE Research Engineer who directed the casting effort. Several other UAB students were also involved in the actual pour. Oberth Award can be seen on the Awards page of the Section's website.

which the busts were actually cast.



http://www1.msfc.nasa.gov/AIAA/

Call for Section Award Nominations

The AIAA Alabama-Mississippi Section is requesting nominations for the 2003-04 Section Year Annual Awards. Nominees for the Section Awards should be individuals who have most closely met the specific award criteria. The awards will be presented at the annual Officers and Board of Director Installation and Awards Banquet, to be held this coming May.

When putting forth an awards nominee, please indicate:

- The Section Award under consideration.
- The name of the nominee (with proper title)
- The nominee's professional position/title and the name of his/her company or employer.
- The home or business address of the nominee.
- A telephone number and e-mail address of the nominee.

Please provide a reason and information in support of your nomination (one page is sufficient). And as the nominator, please provide us your name, address (including e-mail) and a telephone number. You may put forward a nomination by mail to:

AIAA AL-MS Section Attn: Honors and Awards P.O. Box 7208 Huntsville, AL, 35807.

Or you may submit a nomination directly to the Section Director for Honors and Awards, Mr. Tim Hanneman, either by fax at: 256-461-3066, or by e-mail at: timothy.j.hanneman@boeing.com.

Questions may also be directed to Mr. Hanneman at 256-461-2723.

Please submit all nominations by April 21, 2004.

The AIAA Alabama-Mississippi Annual Section Awards are described below:

- 1) The Hermann Oberth Award is presented to a Section member in recognition of outstanding individual scientific achievement in the fields of astronautics and the space sciences, or for the promotion and advancement of the aeronautical sciences. Presented to the recipient will be a bust of Professor Hermann Oberth and a framed certificate.
- 2) The Holger Toftoy Award is presented to a Section member in recognition of outstanding technical management in the fields of aeronautics and astronautics. An engraved plaque will be presented to the recipient.
- **3)** The Martin Schilling Award is presented to a Section member in recognition of outstanding service to the Section, such as major contributions to its growth, technical programs, or administrative functions. The award is named for the Section's founding president, Dr. Martin Schilling.

- **4)** The Professional of the Year is presented to a Section member in recognition of extraordinary dedication, creativity, and leadership while engaged in professional work or activity within the aerospace community.
- 5) The Aerospace Engineer of the Year is presented to an aerospace engineer and Section member in recognition of extraordinary technical ability, creativity, or leadership in the practice of his or her profession.
- **6)** The Young Aerospace Engineer of the Year is presented to an aerospace engineer, 35 years of age or younger, and a Section member in recognition of extraordinary technical ability, creativity, or leadership in the practice of his or her profession.
- 7) The Software Engineer of the Year, is presented to a Section member in recognition of outstanding extraordinary technical ability, creativity, or leadership in the development of software to support significant aerospace programs or the industry at large.

AGAIN...Nomination are due by April 21, 2004.

2004 AL-MS Section Engineering Scholarship Program

This scholarship is to promote, (1) a career in the aerospace industry, and (2) the pursuit of a related engineering or science degree at an Alabama or Mississippi university. Applicants must be graduating high school seniors currently living in the state of Alabama or Mississippi, and planning to attend an ABET-accredited university in the state of Alabama or Mississippi in pursuit of an engineering or science degree that would reasonably lead to a career in aeronautics or astronautics. Three scholarships will be awarded: \$1500, \$1000, \$500. For information and applications, go to:

http://www1.msfc.nasa.gov/AIAA/

Or contact: Mr. Kevin S. Connell at 256-782-5972 (kconnell@jsucc.jsu.edu)

AIAA is requesting nominations for Associate Fellow membership. Those eligible have accomplished or been in charge of important engineering or scientific work, or have done original work of outstanding merit, or have otherwise made outstanding contributions to the arts, sciences or technology of aeronautics or astronautics. Nominees must be Senior Members with at least 12 years of professional experience (four years of post-graduate studies may be included). Three AIAA member references with the standing of the Associate Fellow, Fellow or Honorary Fellow are required. Nomination forms are due by April 15, with references due by May 15. Information and forms are available at www.aiaa.org.

Call for National Award Nominations

A primary responsibility of AIAA is to regularly survey its technological realm, and identify and honor those who have made notable and significant contributions. At this time, AIAA is accepting nominations for the following awards. The nomination deadline is July 1, 2004.

- 1) Aerospace Contribution to Society Award is presented for notable contributions to society through the application of aerospace technology to societal needs.
- 2) Aerospace Software Engineering Award is presented for outstanding technical or management contributions to aeronautical or astronautical software engineering.
- 3) Computer-Aided Engineering and Manufacturing Award is presented for conception, definition, or development of an original concept leading to advancements in the use of interactive computer graphics for conceptual design, computer imagery, or computer-aided design and computer-manufacturing.
- 4) **Digital Avionics Award** is presented for outstanding achievement in technical management or implementation of digital avionics in aerospace systems, including system analysis, design, development or application.
- **5) Elmer Sperry Award** commemorates the achievements of Dr. Sperry by seeking to encourage progress in the engineering of transportation. The award recognizes a distinguished engineering contribution, which through application proved in actual service has advanced the art of transportation.
- 6) Excellence in Aerospace Standardization Award recognizes contributions that advance the health of the aerospace community by enabling cooperation, competition, and growth via the standardization process.
- 7) **F.E. Newbold V/STOL Award** recognizes creative contributions toward the advancement of powered lift flight in one or more of the following areas: initiation, definition and/or management of key V/STOL programs; development of enabling technologies including critical methodology; program engineering and design; and/or other relevant activities or combinations thereof which have advanced the science of powered lift flight.
- 8) Faculty Advisor Award is presented to the faculty advisor of a chartered AIAA Student Branch, who in the opinion of student branch members, and the AIAA Student Activities Committee, has made outstanding contributions as a student branch faculty advisor, as evidenced by the record of his/her student branch in local, regional, and national activities.
- 9) Gardner-Lasser History Literature Award is presented for the best original contribution to aeronautical or astronautical historical non-fiction literature published in the last five years dealing with the science, technology, and/or impact of aeronautics and astronautics on society.

- **10)** Haley Space Flight Award is presented for outstanding contributions by an astronaut or flight test personnel to the advancement of the art, science or technology of astronautics.
- 11) History Manuscript Award is presented for the best historical manuscript addressing the science, technology, and/or impact or aeronautics and astronautics on society.
- **12) Information Systems Award** is presented for technical or management contributions in space and aeronautics computer and sensing aspects of information technology and science.
- **13)** Lawrence Sperry Award is presented for a notable contribution made by a young person to the advancement of aeronautics or astronautics. The nominee must be under 35 years of age on December 31 of the year preceding the presentation.
- **14) Losey Atmospheric Sciences Award** is presented for outstanding contributions to the atmospheric sciences as applied to the advancement of aeronautics & astronautics.
- **15) Pendray Aerospace Literature Award** is presented for an outstanding contribution to aeronautical and astronautical literature in the relatively recent past. Emphasis is upon the high quality or major influence of the piece rather than, for example, the importance of the underlying technological contribution.
- **16) Space Processing Award** is presented for significant contributions in space processing or in furthering the use of microgravity for space processing.
- 17) Summerfield Book Award is named in honor of Dr. Martin Summerfield, founder and initial editor of the Progress in Astronautics and Aeronautics Series of books published by the AIAA. The award is presented to the author of the best book recently published by AIAA. Selection criteria include quality and professional acceptance as evidenced by impact on the field, citations, classroom adoptions and sales.
- **18)** System Effectiveness and Safety Award is presented for outstanding contributions to the field of system effectiveness and safety or its related disciplines.
- **19) Wright Brothers Memorial Trophy Award**, sponsored by the Aero Club of Washington, is presented for significant public service of enduring value to aviation in the United States.

All award nominations must be submitted on the AIAA nomination form (available on the website). The nomination must be supported by a minimum of three and a maximum of five letters of endorsement. Nominations involving more than one individual should be combined. The submitted material should not exceed ten (10) pages. If you have questions, please contact Carol Stewart, AIAA Headquarters Honors and Awards Liaison, at 703/264-7623 or via e-mail at carols@aiaa.org.

2003-04 Section Officers and Board of Directors

Position	Name	Business Phone	E-mail Address
Chairman	Steven R. Noneman	256-544-2048	steven.r.noneman@nasa.gov
Vice Chairman	Joseph D. Sims	256-544-4650	joseph.d.sims@nasa.gov
Secretary	Melissa Van Dyke	256-544-5720	melissa.vandyke@nasa.gov
Treasurer	Kevin P. Higdon	256-775-9906	kevin.higdon@kph-research.com
Membership	Ann F. Whitaker, PhD	256-544-2481	ann.whitaker@nasa.gov
Education	Kevin S. Connell	256-782-5972	kconnell@jsucc.jsu.edu
Public Policy	Carl M. Case		carl_case@knology.net
Honors & Awards	Tim J. Hanneman	256-461-2723	timothy.j.hanneman@boeing.com
Young Professional	Allison C. Cash	256-964-1440	allison.cash@itt.com
Technical	John O. Lassiter	256-544-3022	john.o.lassiter@nasa.gov
Career Enhancement	Henry L. Pugh, PhD	256-461-5615	henry.l.pugh@boeing.com
Pre-College Outreach	Rosalie W. Allen	256-544-0117	rosalie.w.allen@msfc.nasa.gov
Email Coordinator	Todd Honeycutt	256-430-0753	thoneycutt@stsllc.com
Newsletter	G. Alan Lowrey	256-730-4816	gordon.a7.lowrey@Imco.com
Evolution of Flight	Alfred M. Wright	205-876-8037	alfred.wright@rdec.redstone.army.mil
National/RAC	Bobby G. Noblitt	256-461-1993	bobnoblitt@msn.com
Supernumerary	Earl H. Pearce	205-467-6349	epearce@alltel.net
Mailings	Eddie T. Lawhorn	256-880-2062	lawhornet@aol.com
Previous Section Chair	Arloe W. Mayne, PhD	256-881-7124	arloewjr@cs.com
AIAA Staff Liason	Mary Ellen Shook	703-264-3848	maryellens@aiaa.org

AIAA AL-MS Section P.O. Box 7208 Huntsville, Alabama 35807 Nonprofit Organization U.S. Postage Paid Permit #232 Huntsville, Alabama



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